PROCUREMENT OF SCIENTIFIC EQUIPMENT AND MATERIALS FOR KIST

489-H-054

MONTHLY REPORT OF PROGRESS

NUMBER (2)

FOR

NOVEMBER 1969

PREPARED BY

KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY

FOR

REPUBLIC OF KOREA

AND

UNITED STATES

DEPARTMENT OF STATE

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROCUREMENT OF SCIENTIFIC EQUIPMENT AND MATERIALS FOR K.I.S.T.

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PREPARED BY

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OVERSEAS PROCUREMENT MANAGER

YEH HWAN KOH

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DEPARTMENT OF STATE

AGENCY FOR INTERNATIONAL DEVELOPMENT

Submitted by: Moon Taik Shim
MOON TAIK SHIM
Vice-President for Research
Korea Institute of Science
and Technology

November 30, 1969

United States Agency for
International Development to Korea

Attention: Bruce Johnson
Assistant Director for Development Loans,
Engineering & Industry

Subject: Procurement of Scientific
Equipments and Materials for KIST
AID Loan No. 489-H-054
Monthly Progress Report No.2

Gentlemen:

We are pleased to submit the second monthly progress report on the procurement of scientific equipment and materials for KIST.

This report covers procurement status from September to November 30 1969.

Very truly yours,

Moon Taik Shim

MOON TAIK SHIM
Vice-President for Research
Korea Institute of Science
and Technology

MONTHLY REPORT OF PROGRESS

NUMBER 11

C O N T E N T S

I. INTRODUCTION

The Korea Institute of Science and Technology is the first institute that Korea has ever attempted to establish for research and development in order to increase the rate of development of Korean industry and the Korean economy.

Science and Technology are today related not only to the progress and development of a nation's economy but also to the welfare of human beings of the world. It is evident that the advanced countries realize the important bearing science and technology has on every facet of modern life, so, they have made a great effort in developing science and technology.

In the last several years, Korea has made great progress in economic growth and has enhanced the prestige of the country in the free world. However, science and technology in Korea are still not fully developed. Realizing the importance and urgent need for development of science and technology, President Park of the Republic of Korea discussed the establishment of an applied research institute with President Johnson during President Park's official visit to the United States in May, 1965.

As a result of the Presidents' joint communique on their meeting, the Korea Institute of Science and Technology (KIST) was founded in February, 1966 and started its primary activities in relation with its objectives. These prime objectives of KIST are to carry out scientific, technological and engineering-economics research, to conduct technical investigations and examinations, and to provide a suitable and attractive environment for Koran scientists and engineers.

1. CHRONOLOGY OF KIST'S MAJOR EVENTS

May, 1965 - In a joint communique issued by the Presidents of the Republic of Korea and the United States, the establishment of an Institute was suggested.

July,1965 - Dr. Donald F. Hornig, President Johnson's Special Assistant for Science and Technology, and his party visited Korea and subsequently proposed to president Johnson that technical assistance be given for the establishment of the Institute.

Sept.,1965- The United States Agency for International Development retained Battelle Memorial Institute to send a team to Korea to formulate basic plans for the establishment of the Institute.

Dec.,1965 - Battelle completed plans for the establishment of the Institute and submitted its report to AID.

Feb.,1966 - A project agreement was signed by the representatives of the Republic of Korea and the United States of America.

Feb.,1966 - Dr. Choi, Hyung Sup was named as a president of the Institute and the Board of Trustees was established.

May, 1966 - The site was chosen for the Institute's permanent location; within the former boundaries of the Korean Forestry Experimentation Station, at Hoeglkokdong, Sungpuk-ku, Seoul, Korea.

June, 1966 - A technical service contract was concluded by Dr. Choi, Hyung Sup, President of the Institute, and Mr. Donald D. Evans, Representative of Battelle Memorial Institute.

Oct., 1966 - A ground breaking ceremony was held at the site of the new Institute.

Dec., 1966 - Special Assistance Act passed.

Mar., 1967 - Amendment of Assistance Act for KIST was promulgated (No. 1917)

May., 1968 - The site was granted by the Government.

Oct., 1969 - A dedication ceremoney held.

2. CHARACTERISTICS

BASIC CHARACTER

The Institute is an independent, not-for-profit organization with the basic purpose of developing science and technology to support the economic and industrial development of the nation. Preservation of autonomy of research is considered to be of paramount importance in operating the Institute.

FINANCIAL SUPPORT

Financial support for the Institute is furnished by both the Governments of the Republic of Korea and the United States, under a long-term program of assistance which helps assure stability and the attainment of the Institute's objectives. It is intended, however, that the Institute will ultimately become financially self-sufficient through provision of its

services to industry and government agencies on a contract basis.

ASSISTANCE ACT

In order to assure the Institute of autonomous operation and the financial support from the Government, Assistance Act for KIST was promulgated in 1967 as a special legislation, which provides the Government contribution to KIST of the endowment fund and the construction cost, as well as the lease free of charge or grant of national properties.

TAX EXEMPTION

In accordance with the Tax Reduction and Exemption Law, individuals or juridical persons donating money to the Institute or sponsoring research project at the Institute are entitled to an exemption from income tax, or juridical person tax on the amount so donated or expended.

CONTRACT RESEARCH

The Institute is to carry out research entirely for the industry and government agencies on the basis of contractual agreements. In doing this, the Institute carefully preserves all data, information and conclusions exclusively for the use of sponsors, and makes no unauthorized disclosures.

RESEARCH STUDY

For an effective research study, laboratories at the Institute are established on project basis, and research

staffs are employed on a contract basis for a definite period or for a specific project.

FACILITIES AND EQUIPMENT

Laboratory facilities and equipment are provided consistent with the needs of various research programs, and permit full utilization of the professional capabilities of the research staff.

3. SCOPE OF RESEARCH PROGRAMS

The Institute is to carry out comprehensive laboratory investigations for applied and development research directly linked to Korean industry as well as objective-oriented basic research in the fields of sciences, engineering and economics, along with technical services including economic and engineering feasibility studies, assistance in the importation and adoptation of world technology,and provision of technical information.

On the basis of the problem areas of Korean Industry, identified from the technical-economic surveys, and the availability of research staff, the initial fields of research at KIST have been selected as follows:

MATERIALS SCIENCE & METALLURGICAL ENGINEERING

Physical Metallurgy	Foundry
Chemical Metallurgy	Corrosion
Powder Metallurgy	Semiconductor Materials
Metal Working	Refractories

FOOD TECHNOLOGY

Foods in general	New food resources
Marine food products	By-product utilization
Fermented foods	Food microbiology
	Process development

CHEMISTRY & CHEMICAL ENGINEERING

Catalysis & Surface Chemistry	Packaging
Rubber & plastics	Paint & printing ink
Coating	Dyes
Pulp & paper	Inorganic chemicals
Lubricant technology	Organic chemicals
Agricultural chemicals	Cellulose derivative synthesis
Chemical plant design	Textile finishing

ELECTRONICS

Semiconductor devices	Instrumentation & reliability
Passive components	Preocessing techniques
Circuit and systems	Analysis of techniques

MECHNICAL ENGINEERING

Energy & power systems	Plant facilities design
Equipment design & development	Mechanization planning
Product design & development	Applied mechanics
Refrigeration & air conditioning systems	Stress analysis

Manufacturing processes
& quality control

BUILDING TECHNOLOGY

Building technology	Building Materials

ECONOMICS

Applied statistics	Quality control
Market research	Benefit cost analysis
Feasibility studies	Regional development
Optimum process	Transportation

ELECTRONIC DATA PROCESSING

Scientific data processing	Operations research

TECHNICAL INFORMATION

Information analysis	Dissemination of technical information

CHEMICAL ANALYSIS

MATERIAL TESTING

FABRICATION

Research equipment design & fabrication	Demonstration fabrication machines & tools

4. RESEARCH STAFF RECRUITMENT

In order to recruit devoted research staff from home or

abroad, the Institute offers appropriate environment and modern facilities for research, autonomy of research, and stability as well as reasonable salaries.

A total of 50 competent scientists and engineers either joined the Institute so far or signed employment contracts to join by 1970. In early 1970, the Institute will have a total population of 500, including administrative and technical satffs.

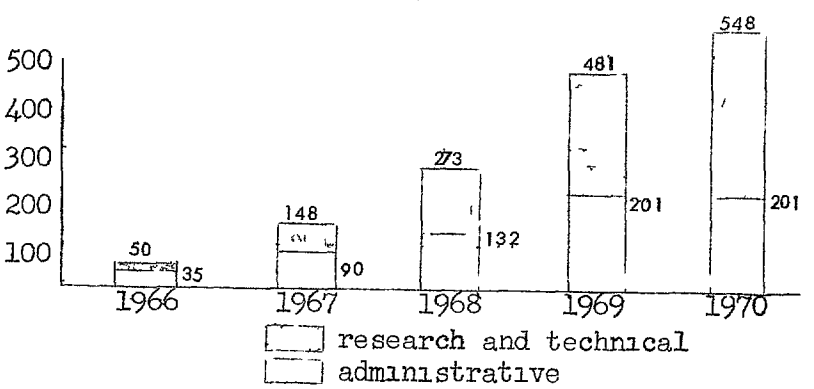
RESEARCH STAFF

As of Nov. 30, 1969

	Employed	Prospective*	Total	%
Home	20	-	20	40
Overseas	24	6	30	60
Total	44	6	50	100

By academic degree: Ph.D. - 33, M.S 7
M.B.A. 1, B.S. 9 Total - 50

STAFF GROWTH



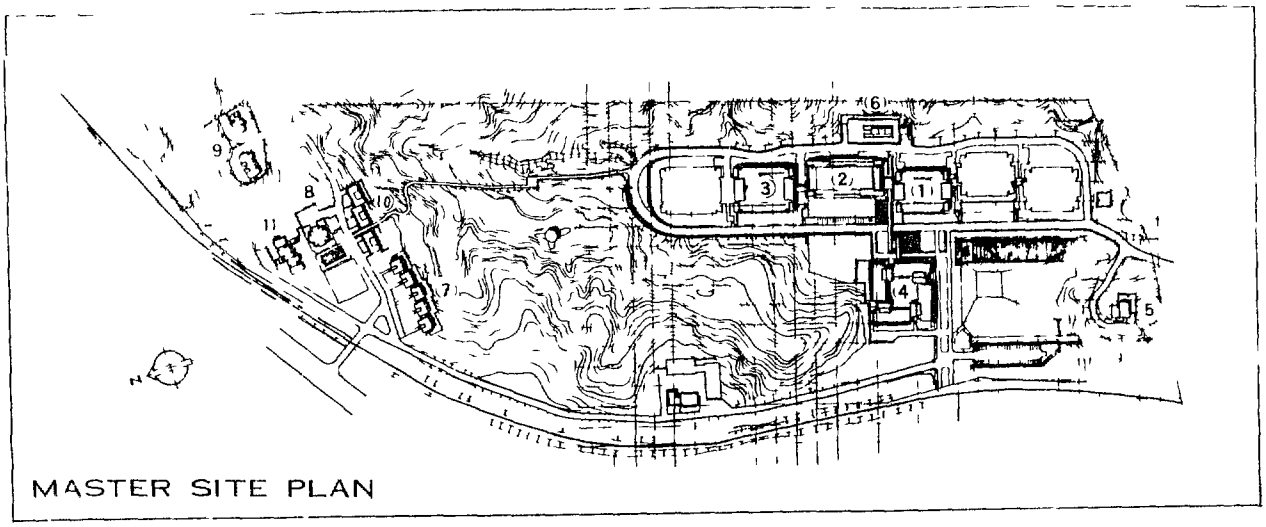
To stimulate and accelerate research activities through exchange of knowledge with advanced nations, the Institute adopted various programs;

To sponsor international seminars or symposia at least once a year;

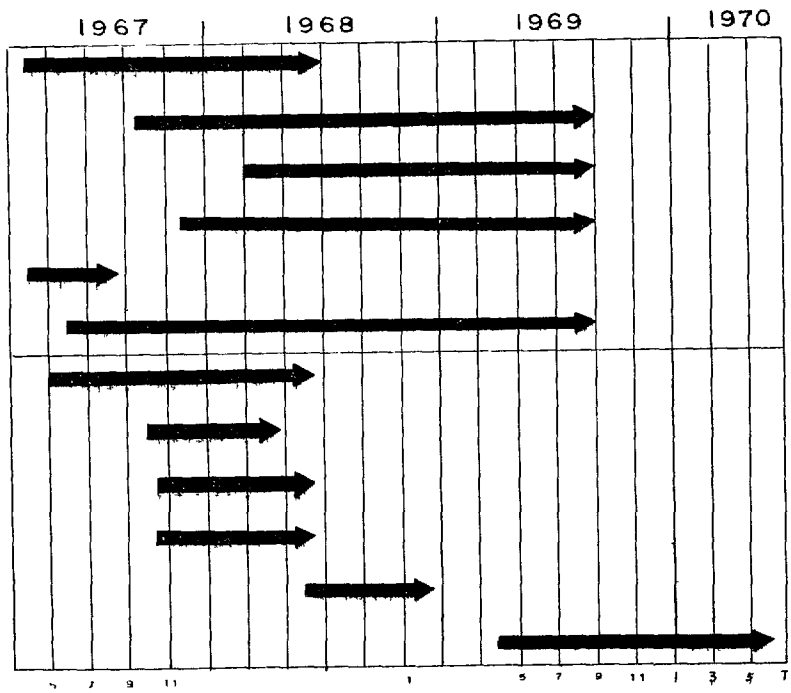
To authorize sabbatical overseas tour in every three years for principal investigators to refresh knowledge;

To utilize post-doctoral fellowship program to attaract Korean scientists abroad.

To invite foreign scientists and engineers for short term visit.



MASTER SITE PLAN



	BUILDINGS	SCALE (Sq ft)	STORIES
1	Research Building #1	862 000	3
2	Fabrication Building	553 000	2
3	Research Building #2	634 000	3
4	Main Building	1 040 000	4
5	Guest House	66 000	2
6	Central Utilities Building	171 000	2
7	Apartment House (30 units)	392 000	5
8	Community Center	75 000	2
9	Individual Houses (3 units)	71 000	2
10	Row Houses (6 units)	125 000	2
11	Dormitory	139 000	3
1	Pilot Plant	360 000	2

II. DESCRIPTION OF THE LOAN

Preeparation of the Approved List of Equipment and the Procedure For Purchase Under the Loan

In the original plan for the Institute, $3 million was allotted for the purchase of laboratory equipment. Of this, $1 million was provided under the grant and the remaining $2 million were to be provided under either a grant or a loan.

A list of equipment totaling $3 million was prepared in 1967 and 1968 by KIST with assistance from counterpart research divisions at Battelle Memorial Institute. The choice of equipment was based on eighteen projected laboratories plus the library and storeroom items. The highest priority items were purchased under the grant which reduced the list to $2 million which would be purchased under the loan. This list of equipment was agreed to by KIST, USAID/K and BMI in 1968.

When actual purchasing under the loan began in about April, 1969, it became apparent that some revisions to this list had become necessary. These revisions resulted from the need for additional laboratories as shown by increased knowledge of the research and development needs in markets in Korea. This increased knowledge also showed the need for some changes in the type of equipment needed for the research to be done. Additionally, in some cases, heads of laboratories began work at KIST and in some cases had suggestions as to equipment needed for their laboratories. The original list, of course, had been made up before many of the laboratory heads were actually at KIST.

The laboratories originally planned in 1967 and 1968 included.

1. Chemical Analysis
2. Corrosion
3. Lubricant
4. Polymer Research I
5. Solied State Chemistry
6. Solied State Physics
7. Semiconductor
8. Passive Component
9. Reliability Testing
10. Physical Metallurgy I
11. Physical Metallurgy II
12. Minerals
13. Foundry
14. Metal Working
15. Food Technology
16. Material Testing
17. Mechanical Engineering
18. Fabrication Equipment

At present the operating laboratories are as follows:

1. Chemical Analysis
2. Corrosion
3. Lubricant Technology
4. Polymer Chemistry
5. Solid State Chemistry
6. Solid State Physics
7. Physical Metallurgy 1.
8. Physical Metallurgy 11
9. Metal Working 1
10. Food Resources
11. Material Testing
12. Chemical Metallurgy
13. Electronics Devices
14. Marine Products
15. Agricultural Chemicals Synthesis
16. Industrial Equipment Engr.
17. Shipbuilding & Ocean Engr.
18. Metal Working 11
19. Technical Economics Group
20. Control & Instrumentation
21. Packaging
22. City and Regional Group
23. Liquid State Chemistry
24. Animal Feed Stuffs
25. Thermo-Hudraulic
26. Organic Synthesis
27. Technical Information Dept.
28. Electronic Data Processing.
29. Machine Shop
30. Pilot plant

Because of these changes, the following procedure was agreed to by USAID/K. Requisitions would be prepared by KIST and if the items were on the $2 million list, BMI/K would certify that in their judgment the items still met the orgial objectives and should be purchased. These requisitions could go directly to OSROK with copies to USAID/K and BMI/K. Where new items were to be requisitioned, it was agreed the BMI/K would consider the items and recommend their purchase as exceptions to USAID/K where in their judgment, the items were needed. This justification statement generally included a description of the item, its use and why it was recommended for purchase. Upon USAID/K's approval, the requisition was sent to OSROK. In many cases, the justification by BMI/K could be made directly but in some cases, assistance was requested from BMI/C.

A somewhat simplified procedure was adopted for those new items under $1,000 in that item-by-item justification was not needed. Rather BMI/K in those cases, if it felt the purchase justifiable, made a blanket justification of the items under $1,000 as being in their judgment necessary.

After OSROK receives the requisitions, they solicit and obtain bids. They then make a preliminary analysis of the bids and recommend a supplier for each item. The bids then are sent to KIST for their review and if their findings agree with those of OSROK, purchasing can proceed. If, however, KIST diagrees with OSROK as to the chosen supplier, KIST and OSROK meet to try to resolve the problem. If agreement cannot be reached then BMI/K is called in as an arbiter.

III. THE CHRONOLOGY OF PURCHASING UNDER THE LOAN

1. LIST OF REQUISITIONS SENT TO OSROK

Req. No.		Commodity	Amount
1)	KIST- 034	Sweep Oscillator and Others	9,000.-
2)	KIST- 038	Electronic Components and Others	15,000.-
3)	KIST- 041	Model 126 Scoop and Others	5,850.-
4)	KIST- 049	Fatigue Testing Machine and Others	24,700.-
5)	KIST- 051	5 X Balcoted Objective and Others	4,000.-
6)	KIST- 058	Crucible Furnace and Others	1,850.-
7)	KIST- 059	DMET Metallurgical Microscope and Others.	1,350.-
8)	KIST- 061	Magnetic Resonance Spectrometer	75,200.-
9)	KIST- 063	Rotary Positive Blower and Others	6,250.-

Total $143,200.-

IV. STATUS OF OSROK ACTIVITIES

1. INVITATION FOR BIDS ISSUED AS OF NOV. 30, 1969

I.F.B.No.	Opening Date	Req. No.	Estimated Amount
1) AID/L-9207-P	Nov. 10, 1969	KIST 021	69,600
		037	
		040	
		054	
2) AID/L-9264-P	Dec. 23, 1969	KIST 034	36,670
		038	
		051	
		055	
		059	
		063	
		055...Rebid Req. from Inv. No. AID/L-9038-P	
		Total.....	$106,270

2. BIDS RECEIVED

I.F.B.No.	Opening Date	Req. No.	Estimated Amount
1) AID/L-9122-P	Aug. 29, 1969	KIST 018	97,110
		030	
		009	
		019	
		031	
		039	
		043	
		044	

	I.F B.No.	Opening Date	Req. No.	Estimated Amount
2)	AID/L-9148-P	Sept. 24, 1969	KIST 016	54,800
			023	
			026	
			029	
			047	
			052	
			001...Rebid Req. from Inv.No.AID/L-9022-P & AID/L-9038-P	
3)	AID/L-9198-P	Oct. 31,1969	KIST 025	105,180
			045	
			048	
			053	
			062	
			007, 027, 033 ...Rebid Reqs. from Inv. No.AID/L-9047-P	

	I F B No.	Opening Date	Req. No.	Estimated Amount
4)	AID/L-9207-P	Nov. 10, 1969	KIST 021	69,600
			037	
			040	
			054	

Total.....$326,690

3. BID UNDER TECHNICAL REVIEW

I.F.B. No.	Opening Date	Req. No.	Estimated Amount
AID/L-9198-P	Oct. 31, 1969	KIST 025	105,180
		045	
		048	
		053	
		062	
		007	Rebid Reqs. from Inv. No. AID/L-9047-P
		027	
		033	

4. BIDS READY TO BE CONTRACTED

	I.F.B. No.	Opening Date	Req. No.	Estimated Amount
1)	AID/L-9122-P	Aug. 29, 1969	KIST 018	97,110
			030	
			009	
			019	
			031	
			039	
			043	
			044	
2)	AID/L-9148-P	Sept. 24, 1969	KIST 016	54,800
			023	
			026	
			029	
			047	
			052	

I.F B. No.	Opening Date	Req. No.	Estimated Amount
		001...Rebid Req. from Inv. No. AID/L-9022 -P & 9038-P	
		Total.....	$151,910

5. CONTRACT STATUS

	Contract Date	I.F.B. No.	Req. No.	Contract Amount
1)	Sept. 5, 1969	AID/L-9047-P	KIST 027 033	$17,371.35
2)	Sept. 12, 1969	AID/L-9022-P	KIST 001	$25,568. -
3)	Sept. 15, 1969	Nil (Negotiated Procurement)	Library Books	$22,431.90
4)	Oct. 22, 1969	AID/L-9038-P	KIST 006 (# 42)	$ 4,200.-
5)	Oct. 29, 1969	AID/L-9093-P	KIST 032 035 003 010 011 014 015	$50,948.28
6)	Oct. 30, 1969	AID/L-9038-P	KIST 006 (# 45)	$21,107.-
7)	Oct. 31, 1969	AID/L-9038-P	KIST 006 (#40, 41 & 43)	$2,461

	Contract Date	I.F.B. No.	Req. No.	Contract Amount
8)	Nov. 18, 1969	AID/L-9093-P	KIST 017	$142,600.79
			024	
			035	
			003	
			010	
			011	
			014	
			015	
			020	
			022	

Total.....$286,688.32

6 CONTENTS OF CONTRACTS

Contents of contracts are refered to in the following tabulation

INV. No . AID/L-9022-P

KIST No. 001

Item No	Commodity	Q'ty	Supplier	Cont No	Cont Amount CIF ($)	Delivery	Remarks
1	Hollow Spindle Lathe & Access	1 ea		AID/L-KOS-9584-YP	25,568.00	28 weeks	Contracted on Sept 12, 1969

INV No AID/L-9038-P

KIST No 006

Item No	Commodity	Q'ty	Supplier	Cont No	Cont Amount CIF ($)	Delivery	Remarks
40,41 & 43	23-134 10" Pedestal Grinder & Others	Various	Rockwell Mfg., Co	AID/L-KOS-9727-YP	2,461 00	120 days	Contracted on Oct 31, 1969
42	Vapor Blast Liquid Honing Machine	1 ea	Vapor Blast Mfg Co	AID/L-KOS-9728-YP	4,200 00	12 weeks	Contracted on Oct 22, 1969
45	1-C Contourmaster Tool and Die Milling Machine & Access	1 ea	Cincinati-Lathe & Tool Co.	AID/L-KOS-9729-YP	21,107 00	35 weeks	Contracted on Oct 30, 1969

INV No AID/L-9047-P

1) KIST No 027

Item No	Commodity	Q'ty	Bid No. Supplier	Cont. No.	Cont Amount CIF ($)	Delivery	Remarks
1 thru 4	Thermo-couple Wires	Various	5	KOS-9497-P	3,674 35	4 months	Sept 5, 1969
14 thru 14-60	Glases & Regulator	1 lot	4	KOS-9498-P	12,416 00	5 months	〃

2) KIST No 033

Item No	Commodity	Q'ty	Bid No	Cont No	Cont Amount CIF ($)	Delivery	Remarks
14 thru 14-6	Materials for Gas-Furnace, Others	Various	12	KOS-9499-P	1,281 00	6 months	Sept 5, 1969

INV No AID/L-9093-P

1) KIST No 017

Item No.	Commodity	Q'ty	Bid No	Cont No	Cont Amount CIF ($)	Delivery	Remarks
1 thru 7-9	Sadther Standard IR, UV, NMR, DTA Spectra 13,000 Grating Standard Spectra-Infrared and Others	Various	11	AID/L-KOS-9718-P	14,450 00	5 months	Contracted on Nov. 18, 1969

2) KIST No 024

Item No	Commodity	Q'ty	Bid No	Cont. No	Cont Amount CIF ($)	Delivery	Remarks
1 thru 1-54	Cary Model 14 Recording Spectro-photometer, Range 1860A-2 65U and Others	Various	10	AID/L-KOS-9719-P	23,412 60	3 months	Contracted on Nov 18, 1969

3) KIST No 032

Item No	Commodity	Q'ty	Bid No.	Cont No	Cont Amount CIF ($)	Delivery	Remarks
1 thru 1-2	Powerstatt	2 ea	14	KOS-9663-P	905 34	10 weeks	
2 thru 3-1	Balance and Others	2 ea 5 box	3	KOS-9664-P	785 20	90 days	

4) KIST No 035

Item No.	Commodity	Q'tv	Bid No	Cont No	Cont Amount CIF (%)	Delivery	Remarks
1 thru 93	Cork Screw and Others	Various	3	KOS-9664-P	2,255 47	90 days	
94	Stopcock, Double	2 ea	3	"	27 20	90 days	
95 thru 97	Gas Chromatography	33 ea					Single Bid & No Bid Bond
98 thru 156	Ground Joints Full Length and Others	Various	3	KOS-9664-P	3,631 68	90 days	
157 thru 167-2	Crucibles-High Form, Coors Porcelain	Various	3	KOS-9664-P	186 17	90 days	

Item No	Commodity	Q'ty	Bid No	Cont No	Amount CIF ($)	Delivery	Remarks
168 thru 210-2	Asbestos Cement and Others	Various	12	KOS-9665-P	852 18	5 months	
211 thru 234-4	Flasks-Kjeldahl	Various	3	KOS-9664-P	575 78	90 days	
235 thru 340	Acetonitrile and Others	Various	12	KOS-9665-P	1,251 15	5 months	
341 thru 517	Alumina, Absorption and Others	Various	12	KOS-9665-P	1,342 69	5 months	
518 thru 521	Natural Tracing Papers and Others	Various	14	AID/L-KOS-9663-P	318 30	14 weeks	
522 thru 523	Thermocouple Wire						Cancel No Bid
524 thru 537	Welded Steel Bench Oiler	Various					Cancel No Bid
538 thru 539	Autoradiographic Stripping Plates and Others	Various	14	AID/L-KOS-9720-P	53 00	14 weeks	Contracted on Nov.18, 1969

Item No	Commodity	Q'ty	Bid No.	Cont.No.	Cont Amount CIF ($)	Delivery	Remarks
540 thru 541	Pentoxide Transist and Others	4 ea					Rebid No Bid
542 thru 543	Boron Trichloride, C P Grade Cylinder	2 ea	14	KOS-9663-P	204.00	12 weeks	
544 thru 545	Gold Indium Foils and Others	11 ea					Rebid Single Bid & No Bid Bond
546 thru 548	Nickel Plating Solution and Others	Various	13	KOS-9666-P	250 00	3 months	
549 thru 550	Replacement Heating Elements and Others	7 ea	3	KOS-9664-P	307 86	90 days	
551 thru 553	Aremco Products						Rebid Single Bid & No Bid Bond

5) KIST No 003

Item No	Commodity	Q'ty	Bid No	Cont No	Cont Amount CIF ($)	Delivery	Remarks
1 thru 4-7	Transformer & Others	Various	12	AID/L-KOS-9721-P	2,806 28	5 months	Contracted on Nov 18, 1969
5 thru 8-5	Aniline Point Apparatus Thin Film and Others	Various	3	AID/L-KOS-9664-P	2,028 34	90 days	
9 thru 9-1	Aluminum Block Oven & Access	Various	13	AID/L-KOS-9718-P	495 00	5 months	Contracted on Nov 18, 1969
10 thru 10-11	Fann Model 39 Recording Viscometer & Access	1 ea	14	AID/L-KOS-9720-P	4,393 10	16 weeks	"
11 thru 11-2	Alpha Model IFW-1	Various					Rebid No Bid
12	No 5 Mikro Atomizer & Model 165-6-20, Mikro Pulse Collector	1 ea	14	AID/L-KOS-9720-P	9,585 00	24 weeks	Contracted on Nov 18, 1969
13 thru 13-1	Majac Jat Pulverizer & Others	2 ea	14	AID/L KOS-9720-P	8,676 00	24 weeks	Contracted on Nov 18, 1969

Item No.	Commodity	Q'ty	Bid No.	Cont No	Cont. Amount CIF ($)	Delivery	Remarks
14	Three Roll Dispersion Mill	1 ea	14 Alt I	AID/L-KOS-9720-P	4,173 00	22 weeks	Contracted on Nov 18,1969
15	Mixer, Charlotte Colloid Mill						Rebid No Bid
16 thru 16-4 (except 16-1)	Falex Lubricant Test Machine & Access	Various	13	AID/L-KOS-9718-P	2,617 50	4 months	Contracted on Nov 18, 1969
17 thru 19-10	Hand Operated Grease Working Machine & Others	Various	3	AID/L-KOS-9664-P	3,082 62	90 days	

6) KIST No 010

Item No	Commodity	Q'ty	Bid No.	Cont No	Cont Amount CIF ($)	Delivery	Remarks
20 thru 20-136 (except 20-10, 20, 25, 43, 45, 51, 53, 55, 58 thru 67, 128, 129, 130, 134 & 135)	Liquid Nitrogen Contractor & Access	Various	4	AID/L KOS-9722-P	31,900 82	120 days	Contracted on Nov 18, 1969
21	X-Y Recorder						Rebid No Bid
22	Viscometer	1 ea	14	AID/L KOS-9663-P	549 00	14 weeks	

8) KIST No 014

Item No.	Commodity	Q'ty	Bid No	Cont No	Cont. Amount CIF ($)	Delivery	Remarks
37 thru 40	Moisture Balance and Others	Various	3	AID/L-KOS-9664-P	1,494 00	90 days	
41	Warburg Apparatus						Cancel
41-1 thru 44-5	Convection Ovens and Others	Various	20	AID/L-KOS-9667-P	4,895.15	180 days	
45 thru 45-13	Controlled Environment incubator Shaper & Others	Various	13	AID/L-KOS-9718-P	5,105 88	3 months	Contracted on Nov 18, 1969
46	Vacuum Oven	1 ea	3	AID/L-KOS-9723-P	231 87	90 days	〃

9) KIST No. 015

Item No	Commodity	Q'ty	Bid No	Cont No	Cont Amount CIF ($)	Delivery	Remarks
47 thru 48	Coulter Counter and Others	2 ea	14	AID/L-KOS-9720-P	6,039 00	24 weeks	Contracted on Nov 18, 1969
49 thru 49-3	Press, Carver Laboratory Model and Others	7 ea	3	AID/L-KOS-9664-P	891 15	90 days	

7) KIST No 011

Item No	Commodity	Q'ty	Bid No	Cont No	Cont. Amount CIF ($)	Delivery	Remarks
23 thru 31-2	Viscometer Bath & Others	Various	12	AID/L-KOS-9721-P	2,359.09	5 months	Contracted on Nov. 18, 1969
32 thru 32-5	PHI 50-ton Hydraulic Press and Others	Various	8	AID/L-KOS-9666-P	5,030 00	3 months	
33	Laboratory Mill and Others	1 ea	8	AID/L-KOS-9666-P	16,580.00	8 months	
34 thru 34-1	Viscometer Model RVT and Others	1 ea	14	AID/L-KOS-9663-P	514.00	14 weeks	
35 thru 35-4	Plastic Deflection Tester and Others	5 ea	13	AID/L-9666-P	2,901 00	5 months	
36 thru 36-3	Wire Drawing Machine and Others	Various					Rebid Price too high

10) KIST No 020

Item No	Commodity	Q'ty	Bid No	Cont No	Cont Amount CIF ($)	Delivery	Remarks
50 thru 50-71 (except 50-43, 50-44 & 50-60 thru 50-71	2000 Cakn R G Electrobalance & Others	Various	14	AID/L-KOS-9720-P	6,892 00	24 weeks	Contracted on Nov 18, 1969

11) KIST No 022

Item No	Commodity	Q'ty	Bid No	Cont No	Cont Amount CIF ($)	Delivery	Remarks
51 thru 51-50	LB-202A Stone Differential Thermal Analysis & Others	Various	13	AID/L-KOS-9718-P	19,410 65	5 months	Contracted on Nov 18, 1969

7. COMPARISON OF ESTIMATED WITH BID COSTS

	I.F B No.	Req. No	Item No.	Estimated Cost	Bid Cost
1)	AID/L-9022-P	KIST-001	1	38,000	25,568.00
2)	AID/L-9038-P	KIST-006	40, 41&43	300.00	2,461.00
	"	KIST-006	42	2,500.00	4,200.00
	"	"	45	7,000.00	21,107.00
			Total...	$9,800.00	$ 27,768.00
3)	AID/L-9047-P	KIST-027	1 thru 4	2,751.75	3,674.35
	"	"	14 thru14 -60	10,611.05	12,416.00
	"	KIST-033	14-thru14 - 6	1,660.00	1,281.00
			Total...	$15,022.80	$17,371.35
4)	AID/L-9093-P	KIST-017	1 thru 7 -9	18,000.00	14,450.00
	"	KISY-024	1 thru 1 -54	24,000.00	23,412.60
	"	KIST-032	1 thru 1 -2	1,010.00	905.34
	"	"	2thru3-1	1,210.00	785.20
	"	KIST-035	1thru93	2,115.43	2,255.47
	"	"	94	21.80	27.20
	"	"	98thru156	3,288.15	3,631.68
	"	"	157 thru 167-2	207.58	186.17
	"	"	168 thru 210-2	835.69	852 18
	"	"	211 thru 234-4	584.58	575.78
	"	"	235thru340	1,077.38	1,251.15
	"	"	341thru517	1,284.20	1,342.69

	I.F.B No.	Req. No.	Item No.	Estimated Cost	Bid Cost
4)	AID/L-9093-P	KIST-035	518thru521	131.00	318.30
	"	"	538thru539	40.00	53.00
	"	"	542thru543	138.00	204 00
	"	"	546thru548	135.20	250 00
	"	"	549thru550	315.00	307.86
	"	KIST-003	1thru4-7	2,527.55	2,806.28
	"	"	5thru8-5	1,308.00	2,028.34
	"	"	9thru9-1	1,147.15	495.00
	"	"	10thru10-11	331.90	4,393.10
	"	"	12	3,108 50	9,585.00
	"	"	13thru13-1	2,220.50	3,676.00
	"	"	14	2,250.00	4,173.00
	"	"	16thru16-4 (except16-1)	499.50	2,617.50
	"	"	17thru19-10	3,989.00	3,082.62
	"	KIST-010	20thru20 -136 (except20-10, 20,25,43,45, 51,53,55,58 thru67,128,129, 130,134,&135)	15,000.00	31,900 82
	"	"	22	511 06	549.00
	"	KIST-011	23thru31-2	1,863.66	2,359.09
	"	"	32thru32-5	4,055.17	5,030 00
	"	"	33	16,553 90	16,580.00
	"	"	34thru34-1	545.50	514.00
	"	"	35thru35-4	2,482.87	2,901.00
	"	KIST-014	37thru40	1,525.00	1,494.00
	"	"	41-1 thru 44-5	4,985.15	4,985.15

	I.F.B. No.	Req. No	Item No.	Estimated Cost	Bid Cost
4)	AID/L-9093-P	KIST-014	45thru45-13	4,243.00	5,105.88
	"	"	46	300.00	231.87
	"	KIST-015	47thru48	7,898.10	6,039.00
	"	"	49thru49-3	674.00	891.15
	"	KIST-020	50thru50-11 (except50-43, 50-44,&50-60 thru50-71)	8,308.29	6,892.00
	"	KIST-022	51thru51-50	16,388.60	19,410.65
			Total	$157,107.41	$193,549.07
			Grand Total	$219,930.21	$264,256 42
			Difference.....	$44,326.21	

V. PERSONNEL

People concerned with procurement activities under the loan are as follows

Organization	Title	Name
OSROK	Chief of Machinery Section Sub-Chief of Machinery Section Handling Man	Kyoo Sung Lee Chul Mook Chin Choong Kyum Kim
KIST	Vice-President for Research Chief of Overseas Procurement Division Assistant	Moon Taik Shim Yeh Hwan Koh Young Soo Park
BMI/K	Advisor Assistant	R.I. Leininger Mary L. Gray
USAID/K	Assistant Director for Development Loans, Engineering & Industry Deputy Assistant Director for Engineering & Industry Development Loan Officer Deputy Supply Advisor	Bruce Johnson Richard L. Goodrich Robert Bell John McHugh